

**Abstract**

The fuel cell comprises at least two elementary cells (2), (3) for exothermic combustive reaction, comprising a heat source arranged such as to face the above and an internal channel (11), formed between the cells for the circulation of a cooling fluid (12), which forms a cooling source. Said cell comprises a number of thermoelectric modules (13), each made of a couple of two conducting material elements (14), (15) of differing nature, a first end of each couple being in thermal contact with the heat source or the cooling source, the second end of each of the elements of said couple being in contact with the other source and electrically connected to an adjacent module.